

REMARKS

Claims 1-9 have been pending in this application and were rejected in Paper No. 3. New claim 10 is added. The Examiner is respectfully requested to reconsider and withdraw the rejection(s) in view of the following remarks and the aforementioned amendments.

REJECTIONS UNDER 35 U.S.C. § 112

Claims 1-9 were rejected under 35 U. S. C. § 112 as allegedly indefinite for lack of proper antecedent basis. Accordingly, claims 1 and 5 have been amended to establish proper antecedent support. The amendments to these claims, however, do not, and are not intended to, narrow or otherwise change the scope of the claims from their original scope. In view of the foregoing amendments it is believed that the § 112 rejection is overcome, and Applicants respectfully request withdrawal of this rejection.

REJECTIONS UNDER 35 U.S.C. §§ 102 and 103

Claims 1-3, 5-7, and 9 were rejected under 35 U.S.C. § 102(b) as allegedly anticipated by Scholz et al (British Patent No. 1215064).

Claim 4 is rejected under 35 U.S.C. § 103(a) as being unpatentable over Scholz et al in view of Japan '338.

Claim 8 is rejected under 35 U.S.C. § 103(a) as being unpatentable over Scholz et al in view of Metzger.

Applicants respectfully submit that these rejections are traversed without the need for substantive change in light of the following remarks.

Original claim 1 recites the following patentably distinguishable feature: “a coolant pool which is open inward in a radial direction is formed in an inner surface of the base”. Applicants submit that a grinding wheel having this feature provides the technical advantage of fully making effective use of the coolant. This benefit is possible because having a coolant pool that is open inwardly in the radial direction prevents the coolant from excessively flowing outwardly (in the radial direction) and being wasted. See Applicants’ exemplary, preferred embodiment discussed in their specification at page 9, line 21 to page 10, line 24. In such embodiment, coolant can not escape outwardly because of the radially inward opening of the coolant pool 14. It is not until the pool 14 overflows that coolant is guided onto the grinding stone means 6 via the lower inclined surface 28. Scholz fails to teach or suggest this feature.

According to Applicants, Scholz discloses a wheel (1) that has a cooling water chamber (7) and connection passages (6) connected to the cooling water chamber (7). In Applicants’ view, the wheel (1) of Scholz is substantially of the type discussed in the comparative example of this application (see Applicant’s specification page 13, line 4 to line 23 and Fig.6). As such, Scholz fails to provide the novel features and the resulting technical advantages provided by Applicants’ inventive grinding wheel. Therefore, Applicants respectfully submit that Scholz fails to inherently or explicitly disclose every feature detailed in claim 1. Thus, independent claim 1 is not anticipated by Scholz under 35 U.S.C. § 102, and the rejection must be withdrawn.

Additionally, Applicants submit that the present invention as set forth in claims 4 and 8 are not made obvious by Scholz singly, or in any combination with JP ‘338 or Metzger. Neither JP ‘338 nor Metzger remedies the above-described deficiencies of Scholz with respect to claims 4 and 8. Therefore, claim 1 and claims 2-9 that depend from claim 1 are likewise patentably

distinguishable over Scholz, JP '338 and Metzger. Moreover, it is respectfully submitted that there is nothing in the cited documents that would have motivated those of ordinary skill in the art to have combined and modified the teachings of the cited art in any way that would render the claimed invention obvious. As such, Applicants respectfully urge that the asserted rejection over the alleged combinations of Scholz, JP '338 and Metzger are overcome, and withdrawal of the rejection is requested.


New claim 10 is similar to claim 1, except that claim 10 recites apparatus apart from the grinding stone means. Like claim 1, however, claim 10 recites the patentable feature of (means defining) a coolant pool that opens "inwardly with respect to a radial direction of the annular base." Claim 10 thus is considered as allowable for reasoning similar to that stated above with regard to claim 1.

CONCLUSION

Applicants respectfully submit that this Amendment and the above Remarks obviate the outstanding objections and rejections in this case, thereby placing the application in condition for immediate allowance. Allowance of this application is earnestly solicited.

If any fees under 37 C.F.R. § 1.16 and 1.17 are due in connection with this filing, please charge the fees to Deposit Account No. 02-4300, Order No. 033773M031.

Respectfully submitted,
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Dated: September 22, 2003

LISTING OF CLAIMS

1. (Currently Amended) A grinding wheel comprising an annular base and a grinding stone means mounted on the under surface of the base, wherein
a coolant pool which is open inward in a radial direction is formed in ~~the~~ an inner surface of the base.
2. (Original) The grinding wheel of claim 1, wherein the coolant pool extends continuously in a circumferential direction.
3. (Original) The grinding wheel of claim 1, wherein the coolant pool is defined between an upper inclined surface which inclines downwardly outward in the radial direction and a projecting surface which extends substantially horizontally and outward in the radial direction below the upper inclined surface.
4. (Original) The grinding wheel of claim 1, wherein a plurality of communication notches or communication holes which communicate with the coolant pool from the top surface of the base are formed at predetermined intervals in the circumferential direction.
5. (Currently Amended) The grinding wheel of claim 1, wherein the base has a lower inclined surface which inclines downwardly outward in the radial direction below ~~the~~ a projecting surface.

6. (Original) The grinding wheel of claim 1, wherein the grinding stone means is composed of a plurality of grinding stones which extend in an arc form in the circumferential direction and are spaced apart from one another in the circumferential direction.

7. (Original) The grinding wheel of claim 1, wherein a plurality of coolant guide grooves which extend from the coolant pool to the grinding stone means are formed in the inner surface and the under surface of the base at predetermined intervals in the circumferential direction.

8. (Original) The grinding wheel of claim 7, wherein the coolant guide grooves extend from the coolant pool toward the grinding stone means and are inclined toward one side in the circumferential direction.

9. (Original) The grinding wheel of claim 7, wherein the grinding stone means is composed of a plurality of grinding stones which extend in an arc form in the circumferential direction and are spaced apart from one another in the circumferential direction, and the coolant guide grooves are formed correspondingly to the grinding stones.

10. (New) An apparatus for use with a grinding stone means to provide a grinding wheel, said apparatus comprising:

an annular base;

means, located on an under surface of the base, for mounting a grinding stone means; and

means, located at an inner surface of the base, for defining a pool for receiving coolant
therein, the means defining the pool opening inwardly with respect to a radial direction of the
annular base.
